

Amendments to the Claims:

Claims 1-9, 14-20, and 25-32 were pending at the time of the Final Office Action.

Claims 1-8 are hereby canceled.

Claims 9, 14-20, and 25-32 remain pending.

1.-8. (Canceled).

9. (Previously Amended) An electronic system, comprising:

a signal lead;

a communications module including at least one of a transmitter module configured to transmit a data signal and a receiver module adapted to receive a data signal, wherein the transmitter module comprises a transmitter coupled to a first gain, and a first low-pass filter coupled between the first gain and the signal lead, and wherein the receiver module comprises a receiver coupled to a second low-pass filter, and a second gain coupled between the second low-pass filter and the signal lead; and

a capacitive coupling module coupled between the communications module and the signal lead, the capacitive coupling module including

a first member having at least one first conductive lead disposed therein and a dielectric portion coupled to an end portion of the at least one first conductive lead; and

a second member having at least one second conductive lead disposed therein, the first and second members being coupled such that respective end portions of the first and second conductive leads are operatively positioned and spaced apart by the dielectric portion, the dielectric portion being configured to capacitively couple the respective end portions of the first and second conductive leads and to allow signals to be at least one of transmitted and received therethrough.

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Canceled)

14. (Original) The electronic system of Claim 9, wherein the dielectric portion comprises a first dielectric portion, further comprising a second dielectric portion coupled to the end portion of the at least one second conductive lead.

15. (Original) The electronic system of Claim 9, wherein the at least one first conductive lead includes a pair of first conductive leads having a corresponding pair of dielectric portions coupled to end portions thereof, and wherein the at least one second conductive lead includes a pair of second conductive leads.

16. (Original) The electronic system of Claim 9, wherein the first and second conductive leads comprise size 12 leads, and wherein the thickness of the dielectric portion is approximately 1 mm, and wherein the dielectric portion has a dielectric constant of approximately three.

17. (Original) The electronic system of Claim 9, wherein the at least one first conductive lead includes a pair of first conductive leads having a corresponding first pair of dielectric portions coupled to end portions thereof, and wherein the at least one second conductive lead includes a pair of second conductive leads having a corresponding second pair of dielectric portions coupled to end portions thereof, wherein the first and second pairs of conductive leads comprise size 12 leads, and wherein the thickness of the first and second dielectric portions is approximately 0.5 mm, and wherein the first and second dielectric portions have a dielectric constant of approximately three.

18. (Previously Amended) An aerospace vehicle, comprising:
a fuselage;

a propulsion system operatively coupled to the fuselage; and
an electronic system disposed within the fuselage and including
a signal lead;

a communications module including at least one of a transmitter module configured to transmit a data signal and a receiver module adapted to receive a data signal, wherein the transmitter module comprises a transmitter coupled to a first gain, and a first low-pass filter coupled between the first gain and the signal lead, and wherein the receiver module comprises a receiver coupled to a second low-pass filter, and a second gain coupled between the second low-pass filter and the signal lead; and

a capacitive coupling module coupled between the data communications module and the signal lead, the capacitive coupling module including

a first member having at least one first conductive lead disposed therein and a dielectric portion coupled to an end portion of the at least one first conductive lead; and

a second member having at least one second conductive lead disposed therein, the first and second members being coupled such that respective end portions of the first and second conductive leads are operatively positioned and spaced apart by the dielectric portion, the dielectric portion being adapted to capacitively couple the respective end portions of the first and second conductive leads and to allow signals to be at least one of transmitted and received therethrough.

19. (Original) The aerospace vehicle of Claim 18, wherein the electronic system is operatively coupled to the propulsion system.

20. (Original) The aerospace vehicle of Claim 18, further comprising a flight control system disposed within the fuselage, and wherein the electronic system is operatively coupled to the flight control system.

21. (Canceled)

22. (Canceled)

23. (Canceled)

24. (Canceled)

25. (Original) The aerospace vehicle of Claim 18, wherein the dielectric portion comprises a first dielectric portion, further comprising a second dielectric portion coupled to the end portion of the at least one second conductive lead.

26. (Original) The aerospace vehicle of Claim 18, wherein the at least one first conductive lead includes a pair of first conductive leads having a corresponding pair of dielectric portions coupled to end portions thereof, and wherein the at least one second conductive lead includes a pair of second conductive leads.

27. (Original) The aerospace vehicle of Claim 18, wherein the first and second conductive leads comprise size 12 leads, and wherein the thickness of the dielectric portion is approximately 1 mm, and wherein the dielectric portion has a dielectric constant of approximately three.

28. (Previously Amended) A method of transmitting signals, comprising:
providing a signal lead;

providing a communications module including providing at least one of a transmitter module adapted to transmit a data signal and a receiver module adapted to receive a data signal, wherein providing the transmitter module include providing a transmitter coupled to a first gain, and providing a first low-pass filter coupled between the first gain and the signal lead, and wherein providing the receiver module comprises providing a receiver coupled to a second low-

pass filter, and providing a second gain coupled between the second low-pass filter and the signal lead;

providing a capacitive coupling module coupled between the data communications module and the signal lead; and

capacitively transmitting the data signal between the communications module and the signal lead.

29. (Previously Amended) The method of Claim 28, wherein providing a capacitive coupling module includes:

providing a first member having at least one first conductive lead and a dielectric portion coupled to an end portion of the at least one first conductive lead; and

providing a second member having at least one second conductive lead, the first and second members being coupled such that respective end portions of the first and second conductive leads are operatively positioned and spaced apart by the dielectric portion, the dielectric portion being configured to capacitively couple the respective end portions of the first and second conductive leads and to allow signals to be at least one of transmitted and received therethrough.

30. (Previously Amended) The method of Claim 29, wherein the dielectric portion comprises a first dielectric portion, further comprising a second dielectric portion coupled to the end portion of the at least one second conductive lead.

31. (Previously Amended) The method of Claim 29, wherein the at least one first conductive lead includes a pair of first conductive leads having a corresponding pair of dielectric portions coupled to end portions thereof, and wherein the at least one second conductive lead includes a pair of second conductive leads.

32. (Previously Amended) The method of Claim 29, wherein the first and second conductive leads comprise size 12 leads, and wherein the thickness of the dielectric portion is approximately 1 mm, and wherein the dielectric portion has a dielectric constant of approximately three.